Table 1. Shoreline categories in the Albemarle-Pamlico Estuarine System and their defining parameters (modified from Riggs and Ames, 2003).

SHORELINE CATEGORIES	SHORELINE SUB-TYPE	DEFINING PARAMETERS
Sediment Bank Shorelines	Bluff High bank Low bank	Greater than 20 feet 5-20 feet Less than 5 feet
Organic Shorelines	Swamp forest Marsh	Freshwater riverine floodplains and freshwater pocosins Fresh, brackish, and salt waters
Combination Shorelines	Sediment bank with cypress fringe Sediment bank with marsh fringe Sediment bank with fringe of log and shrub debris Low sediment bank with stumps Swamp forest with strandplain beach Marsh with strandplain beach Human-modified shoreline	
Back-Barrier Shorelines	Overwash barriers Complex barriers	Sand fans and platform marshes Sediment banks and organic banks
	Inlet	Flood-tide deltas

Sand that forms the beach is derived from erosion of the adjacent sediment bank (Figure 3 A, B). Organic shorezones consist of water-tolerant flora, including grasses (e.g., smooth cordgrass and salt meadow cordgrass: *Spartina alterniflora* and *Spartina patens*), rushes (e.g., black needlerush: *Juncus roemerianus*), shrubs (e.g., marsh elder: *Iva frutescens*) that grow at the land/

water interface and are capable of withstanding extended periods of flooding by water with variable salinities. In freshwater areas, trees (e.g., bald cypress and water tupulo: *Taxodium distichum* and *Nyssa aquatica*) form extensive swamp forest wetlands. Estuarine marsh shorezones occur throughout most of the estuarine system (Figure 3 C), but swamp forest

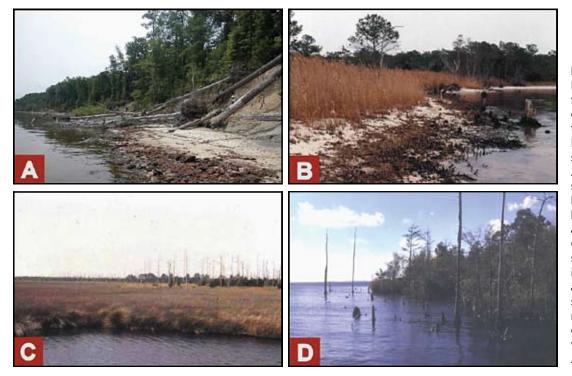


Figure 3. Photographs show four different types of shorezones within the Albemarle-Pamlico estuarine system (Riggs and Ames, 2003): A) high sediment bank; B) low sediment bank being converted to a freshwater marsh; C) platform marsh shoreline retreating into a swamp forest; and D) pocosin swamp forest receding shoreline common in fresh water portions of the APES region.